WPS4783

POLICY RESEARCH WORKING PAPER 4783

Social Transfers, Labor Supply and Poverty Reduction

The Case of Albania

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November 2008

Policy Research Working Paper 4783

Abstract

In 1993, in response to persistent unemployment, and rising poverty and social unrest, the government of Albania introduced an anti-poverty program, namely Ndihma Ekonomike; in 1995 it was extended to all poor households. This paper estimates the separate effects of participation in this income support program and the old-age pension program on objective and subjective measures of household poverty. The analysis uses the nationally representative Albanian Living Standards Measurement Surveys carried out in 2002 and 2005. Using propensity score matching methods, the paper finds that Ndihma Ekonomike households, particularly urban residents, have lower per capita consumption and are more likely to be discontented with their lives, financial situation, and consumption levels than their matched comparators. In contrast, households receiving pensions are not significantly different from their matched comparators in reference to the same set of outcomes. The paper finds that the negative impact of Ndihma Ekonomike participation on welfare is driven by a negative labor supply response among work-eligible individuals. This negative labor response is larger among women and urban residents. In contrast to Ndihma Ekonomike, the receipt of old-age pension income transfers does not significantly impact the labor supply of prime-age individuals living in pension households

This paper—a product of the Poverty Reduction and Economic Management, Europe and Central Asia Region, and Human Development and Public Services Team, Development Research Group—is part of a larger effort in the departments to understand the impact of social protection programs on the labor supply of by prime-age individuals and poverty reduction. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at adabalen@worldbank.org, tkilic@worldbank.org, and wwane@worldbank.org.

Social Transfers, Labor Supply and Poverty Reduction: The Case of Albania

By

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Keywords: Social protection; Labor supply; Albania
JEL Codes: H53; J22

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1. Introduction[1]

Between 1945 and 1990, the communist economy of Albania was characterized by an absolute dependence on central planning, the elimination of private property, and the pursuit of national self-reliance. Since the country followed a policy of complete social and economic isolation, the international movement of its citizens was also prohibited. This self-seclusion was exacerbated during the 1970s, as foreign aid and investment were constitutionally outlawed in 1976. Consequently, the average annual GDP growth was 1 percent throughout the 1980s, compared to 5 percent in the previous decade. By 1990, the economic decline was so severe that over-reliance on central planning was abandoned. With the collapse of communism, industrial closures led to massive unemployment, and the subsequent contraction of the state revenues limited the government's ability to provide adequate unemployment benefits for the laid-off workers. In addition, the removal of price controls triggered a significant decline in the real incomes of Albanian households.

In response to persistent unemployment, and rising poverty and social unrest, the government introduced an anti-poverty program, namely Ndihma Ekonomike (NE), in 1993. Although originally designed to support urban families without income, and rural households with small landholdings, the program was extended to all poor households in 1995. Even though the objective of the NE and many other Albanian social transfer initiatives instituted or expanded during the 1990s is to lift poor households out of poverty, their performance has never been assessed. Despite Albania's impressive growth performance recently, survey data shows that the poverty rate remained at 18.5 percent in 2005 (World Bank and INSTAT, 2006). As the country strives to match its post-transition growth performance with significant reductions in poverty,

[1]The information presented in this section on Albania's pre-transition background is obtained from Haderi, Papapanagos, Sanfey & Talka (1999).

evaluating its social protection programs should be central to successful anti-poverty policy-making.

This study is, to the best of our knowledge, the first systematic impact evaluation of the NE and the old-age pension programs, which constitute the core of the Albanian social protection system. It uses the two recent (2002 and 2005) nationally representative Albanian Living Standards Measurement Surveys (ALSMS02 and ALSMS05, respectively) to estimate the separate effects of participation in these programs on household's objective and subjective poverty measures. In the absence of panel consumption data, the empirical methodology of choice is propensity score matching. With respect to their matched comparators, the NE households have on average a lower per capita consumption, and exhibit a higher degree of discontent with life, financial situation, and consumption levels. These differences are mainly driven by the urban areas. Rural differences, while still significant, are much less alarming in terms of magnitude. Conversely, the average differences in all welfare outcomes of interest across pension treatment and comparison groups are *not* statistically significant.

In order to provide a potential explanation of the program impacts on household welfare outcomes, we investigate the possibility of a negative labor supply response among work-eligible individuals to household NE and/or old-age pension receipts. Indeed, a well-documented unintended consequence of income transfers is the negative labor supply response to program participation (Murray, 1984; Harrington, 1984; Darity Jr. & Myers Jr., 1987). Sometimes, the disincentive effects of the transfer programs may be so significant that they outweigh the redistributive gains. In the extreme, the negative labor supply effect may lead to less of a reduction in poverty and high inequality, contrary to a program's objectives.

Most of the evidence on the negative labor supply response to transfer programs comes from evaluations of programs managed by industrialized countries (see reviews by Hausman, 1985; Blundell & Macurdy, 1999; Moffitt, 2002). Far less is known about these responses in the context of developing or transition economies many of which like developed countries, manage multiple cash transfers programs as part of their anti-poverty strategy. However, because they often also experience high levels of unemployment, the distortionary effect of transfers on labor supply may be minimal. Establishing the validity of this claim is important, since it can influence the direction of welfare reform. A negligible labor supply response puts the focus of reforms on the efficient delivery of benefits, whereas a substantial negative labor supply response renders the alleviation of work disincentive effects paramount in search of the best way to structure the program and lift the needy out of poverty.

Moreover, an important debate in the literature is whether the negative labor supply response is through a reduction in hours or weeks worked (at the intensive margin) or the likelihood of labor force participation (at the extensive margin) (Heckman, 1993). The emerging consensus in the literature on the U.S. suggests that much of the labor supply response to income support programs, especially for low income earners, takes place on the extensive margin (Eissa & Liebman, 1996; Meyer & Rosenbaum, 2001; Eissa & Hoynes, 2004; Eissa, Kleven, & Kreiner, 2004). This is important for the design of the optimal transfer policy which as shown by Saez (2002) depends on the margin on which the behavioral responses are concentrated.

Furthermore, for developed economies, participation decisions often boil down to whether or not to take up wage employment. In developing and transition economies, however, individuals have a number of options, including wage employment for a non-household member, working on a household farm or working on own account. Therefore, exploring the labor supply

response to an income support program across these employment schemes is interesting in and of itself, especially in light of the optimal transfer policy discussed in the recent empirical literature.

An additional contribution of our paper is to look at whether the labor supply response will differ across transfer programs. Many analysts look at the labor supply response of one program in isolation. From the developing countries, one such program that has received significant attention is the South African old-age social pension (see Case & Deaton, 1998; Bertrand, Mullainathan & Miller, 2003; Ardington, Case & Hosegood, 2007). There are, however, reasons why looking at more programs is important. It may tell us whether households treat transfer programs differently. Income from one transfer program may be treated as certain income, while another may be treated as "temporary", which has different implications for household behavior. In developing countries, knowing which of the many transfer programs induce larger negative labor supply responses can also inform prioritization and sequencing of reforms of the transfer programs.

Hence, the paper goes on to explore the impact of *household* receipts from NE and old-age pension on labor supply of *work-eligible individuals* at the extensive and intensive margins,[2] using the Albanian Panel Survey (APS). The panel regression models used also control for household receipts from work invalidity pension, and "other"[3] transfer programs. However, the coefficients on these variables are not reported, considering our focus on the NE program and the old-age pensions. Given distinct gendered and urban/rural differences in labor market outcomes,

[2]Traditionally, the empirical studies analyzing labor supply response on the intensive margin have used cross sectional data, and defined the outcome of interest as hours or weeks worked *conditional* on labor force participation. In the case of panel data, if regressions of hours or weeks of labor supply are conditioned on labor force participation, this is likely to lead to an unbalanced panel and loss of information, since labor force participation status of individuals does not necessarily stay constant over time. Given this complexity, this study refers to labor supply at the intensive margin simply as hours or weeks worked, without conditioning the outcome on labor force participation.

[3]We define household work invalidity pension receipts to include disability, unemployment, illness and maternity benefits received by household members. Household receipts from "other" social protection programs is the sum household member receipts from survivor, special merit, war veteran, social care/services pensions.

as outlined in Section 3, the paper estimates the heterogeneity of program impact by urban/rural residence and by gender.

The results show that the labor supply response to household NE receipts is large and negative, whether labor supply is measured in terms of labor force participation, hours or weeks worked. Moreover, the negative labor supply response is larger among women, and is principally driven by urban individuals. Unlike the South African case, household pension receipts in Albania do not exert any impact on individual labor supply, regardless of gender or urban/rural residence.

The paper is organized as follows. Section 2 provides the descriptions of the social protection programs of interest. Section 3 presents the recent Albanian labor market dynamics. Section 4 describes the data, while section 5 explains our empirical approach. Sections 6 and 7 report the regression results, and the concluding remarks, respectively.

2. Albanian Social Protection Programs

The Albanian social protection system is composed of multiple programs which attempt to provide extensive coverage against the risks of poverty, old-age, disability, unemployment, short term illness, and maternity. With the exception of social assistance transfers provided by the NE program, all social protection benefits are financed through payroll contributions of both employers and employees. However, the post-transition surge in the degree of labor market informality has led to inadequate revenue generation via payroll contributions, while the existence of several generations of elderly, most of whom have full pension rights, has limited the government's ability to provide comprehensive social protection. The country avoided a fiscal crisis in the social protection system mainly by compressing benefit levels. This has in turn promoted individuals to declare lower earnings and spend more of their careers in the informal

sector, as benefits are likely to be low regardless of the level of contributions. Below, we provide the detailed descriptions of the social protection programs of interest.

2.1 Ndihma Ekonomike[4]

Albania is divided into 12 administrative regions (prefectures), 36 districts and 374 municipalities (65) and communes (309). As currently administered, the NE program requires the elected councils of communes to submit their requests for social assistance funds to the Regional State Social Service Office Administration based on their own assessments of their households' needs. These requests are considered by the State Social Service Administration (SSS), which assesses and submits each commune's request for financial assistance to the Directorate for Programming and Development (DPD) in the Ministry of Labor and Social Affairs (MLSA). The DPD then decides on the final allocation to each commune, in accordance with the national budget adopted by the parliament.[5]

Subsequent to the decision of the DPD and the distribution of NE funds to municipalities and communes, the *intra-commune* allocation process has three steps. First, the head of the household applies for social assistance at the local NE office and undergoes an interview with a social administrator. Filing of applications for social assistance occurs *monthly* whereas the interview by the social administrator is renewed *annually*. Monthly application requires the head of the household to re-state the income sources of the household as well as any updates regarding the employment status of household members or household property ownership. This

[4]The details of the NE program presented in this section are obtained from Albanian Council of Ministers (2005).
[5]The DPD's determination process of communes' final NE allocations is not as transparent as it should be. None of the official MLSA documents clearly defines the specifics of the inter-commune allocation process. However, it is known that the commune councils provide the Ministry information on a range of socio-economic variables at the commune level that are relevant to the NE program. The weight assigned to each variable is determined by the SSS specialists.

information has to be verified every month via the collaboration between the local NE office and other public offices.

Necessary documentation for the first-time application consists of (i) a statement of the socio-economic status of the household[6]; (ii) a family status certificate, which includes information on the date of registration of the present dwelling, previous dwelling location, and any other family changes/additions; (iii) a certificate of verification of ownership issued by the Immovable Properties Registration Office; (iv) land titles for areas where land registration is not finalized; and (v) certificates issued by the labor office every three months for working-age household members who are unemployed job seekers.

The documents required from other public offices are gathered directly by the local program office. Following the collection of the required documentation and information cross-check, the social administrator verifies the socio-economic status of applicants by paying annual home visits and assessing dwelling conditions. She crafts a list of eligible recipients and estimates each household's need according to its size, earnings potential, and landholdings. This detailed information collection and verification process stems from the local administrators' superior information on the socio-economic status of applicant households which also led to the decentralization of the program's implementation.

The Albanian government considers households with no or insufficient income as eligible for social assistance. Participation in NE also requires the head of household to be unemployed. On the other hand, households are ineligible for social assistance if at least one member (i) owns stakes/shares of any kind other than the dwelling and agricultural land; (ii) is abroad for any reason other than education, medical treatment, diplomatic work, or assignment at an

[6]This statement is submitted by the head of the household at the time of the application and renewed annually. It provides information on all household income sources, household composition and assets, dwelling conditions, as well as employment, health and education status all of household members.

international organization, (iii) is unemployed but not registered as a jobseeker, with the exception of agricultural households, and disabled individuals, (iv) refuses to take up employment offers by the employment office and/or does not participate in community works organized by the municipality or in vocational training courses when unemployed, able and of working age; (v) does not withdraw the social assistance amount within 6 working days of funds becoming available at the bank; or (vi) takes purposeful actions to receive unmerited social assistance.

The benefit guidelines are established by the central government and cannot be altered by local authorities. The *potential* monthly compensation currently consists of (i) 2600 Lek for the head of the household and each household member above the age of 18, (ii) 600 Lek for each household member that is 18 years old, and (iii) 700 Lek for each household member under 18. The monthly social assistance cannot exceed 7000 Lek, regardless of the household's size and composition.

The eligible household's *actual* monthly social assistance allocation depends on its earnings which include household receipts from (i) non-farm economic activities, (ii) different schemes of social protection, and (iii) any type of capital, land production, and livestock. The household's *actual* level of social assistance is computed by subtracting its actual earnings from the *potential* monthly social assistance. This implies a benefit reduction rate of 100 percent. Households with a calculated social assistance amount of 800 Lek or less become ineligible. Considering that the absolute poverty line utilized to identify the poor households in this study is 4981 Lek per capita, even the maximum NE program benefit may not always be adequate enough to provide the basic needs of program beneficiaries, in the absence of other income

sources. In 2002, the average NE benefit was 2389 Lek, roughly 50 percent of the poverty line, and 25 percent of the monthly minimum wage.[7]

Finally, the social administrator submits the list of eligible families along with the calculated social assistance allocations to the elected commune council. The latter subsquently determines the *final actual* allocation for each household. The council has the authority to (i) condition social assistance on participation in community projects, and (ii) revise the list and payment per household, according to the availability of funds from the center. The social assistance receipts may thus change throughout the year, based on (i) semi-annual evaluations by the social administrator and (ii) bi-monthly fund allocations from the center to the commune.

As Table 1 indicates, in 2005, the total expenditure on the NE program was 3.3 billion Lek (1$ = 103.3 Lek, 12/2005 Average) or 6.0 (0.4) percent of total government expenditure on social protection (GDP) (World Bank, 2006c). Over the period of 1993-2004, the program budget decreased from 1.4 to 0.47 percent of GDP, and from 3.4 to 1.9 percent of government spending (Kolpeja, 2006).

2.2 Old-Age Pensions[8]

In addition to the NE program, the estimation of the impact of household old-age pension receipts on household consumption and work-eligible individual labor supply is at the heart of this analysis. According to Table 1, the government allocated the greatest share (68.0 percent) of social protection expenditure in 2005 to old-age pensions by spending 40.2 billion Lek. The eligibility for old-age pensions is based on the number of years of contributions and the retirement age, which was 60/55 for men and women, respectively, in 2001. Since 2002, it has

[7] The monthly minimum wage was 9400, 10080, 11800 Lek in 2002, 2004, and 2005, respectively. (World Bank, 2006b)

[8] The background information on old-age pensions is obtained from World Bank (2006a).

been rising by 6 months per annum in order to reach the 65/60 mark by 2012. While 35 years of service is required to be a pension recipient, prorated pensions are available after 15 years of service.

The monthly old-age pension is composed of a base pension, the minimum pension, and an increment that reflects the length of contribution history. Due to differences in standards of living, rural pensioners have a lower base pension than their urban counterparts. The pension contribution rate was 29.9 percent of which 71.2 percent are covered by the employer. The high contribution rate is believed to drive the steady decline in labor force formalization and the rate of participation in old-age pensions among private businesses since transition.

Furthermore, the taxable salary cannot be more than five times the minimum wage, while the maximum amount of pension received by an individual cannot exceed twice the minimum pension. These restrictions encourage individuals to underreport earnings/time worked and to work for fewer years since working substantially longer will not bring them higher benefits. Hence, while the private sector is supposed to pay better salaries than the public sector, more than 50 percent of private sector workers are declaring minimum wages as only 1 percent of public sector employees are declaring minimum wage. Lastly, although approximately 372,000 people are estimated to be above the retirement age, more than 440,000 are currently pension recipients. The discrepancy is in part due to the failure of families to inform the Social Insurance Institute (SII) that the pensioner has died and that the pension should be terminated.

3. Albanian Labor Market Dynamics[9]

Since the collapse of the pyramid investment schemes in 1997, Albania's GDP has grown on average roughly 8 percent each year. Yet, as a result of improved allocation of production

[9]The findings presented in this section are obtained from World Bank (2006b), unless otherwise stated.

factors, the economy has actually managed to grow without significant employment expansion. Resources have been reallocated from low-productivity sectors like agriculture to relatively higher-productivity sectors, such as services and construction. For the 1993-2003 period the contribution of total factor productivity growth to the average annual real GDP growth of 6.3 percent was 6.1 percentage points.[10] Considering the almost nonexistent contribution of employment growth to the overall post-transition output expansion, it is important to understand the labor market dynamics in Albania, which will also help in forming expectations regarding the impact of social protection receipts on labor, and poverty outcomes.

Public sector employment decreased from 850,000 in 1991 to 169,000 in 2006. A significant part of this reduction originated from the privatization of state-owned enterprises in early transition. According to annual employment figures presented in Table 2, the public sector accounts for 18 percent of total employment in 2006 versus 58 percent for the agricultural sector. Although employment is partly shifting to the private, non-agricultural sector, job creation has been stagnant, with only 23,000 new jobs created between 2001 and 2004. The most common transition from unemployment to work is into self-employment in agriculture or the informal sector. Very few of the previously unemployed manage to find formal wage employment.

According to the LSMS estimates in Table 3, the national labor force participation rate was between 64-69 percent in 2004, depending on the definition used.[11] The 2004 national

[10]In terms of overall ease of doing business, World Bank's Doing Business 2006 ranking places Albania at 117 among the 155 countries (World Bank, 2006b). Albania performs poorly (i.e. is in the bottom third) in the following areas: starting a business, dealing with licenses, hiring and firing, protecting investors, paying taxes, and enforcing contracts (World Bank, 2006b). These findings partially explain the lack of substantial job creation in the nonagricultural private sector.

[11]Under the standard definition, adults who are not employed must engage in active job search to be classified as in the labor force and unemployed. Willingness to take a job without active job search is considered inadequate. Under the relaxed definition of labor force participation and unemployment, individuals without jobs are included in the labor force and considered unemployed if they have either searched for work in the last four weeks or have not searched but would be willing to take a job in the next two weeks. In other words, including estimates based on the

employment rate was only 60 percent. There are also major differences in rural and urban labor market outcomes, as shown in Table 3. Participation in the labor force is substantially more likely in rural than urban areas. This is mainly driven by employment in subsistence family farming in rural areas, where family labor (often unpaid) is the primary factor of production. Since the rural rate of poverty stood at 24.5 percent in 2005 (compared to 11.2 percent in urban areas), inactivity and unemployment are typically not in the choice set of rural individuals (World Bank & INSTAT, 2006). This is not the case in the urban economy where insufficient labor demand breeds inactivity and unemployment among the working-age population.

Moreover, Table 4 demonstrates distinct differences in employment outcomes across men and women. The LSMS data indicate that the unemployment rate is considerably higher for women. In 2004, the women's unemployment (employment) rate was 5 (22) percentage points higher (lower) than the rate for men. Among the unemployed, women are also more likely to be discouraged than men, as measured by the differential between the standard and relaxed unemployment rates. While the 2004 difference was about 10 percentage points for women, it was 6 points for men. Breaking down rural/urban labor market statistics by gender in Table 4 also enables to determine the factors driving the overall differences in labor market outcomes. Aggregate indicators are significantly better for both men and women in rural areas where gender disparities are also narrower.

As transfer recipients adjust their labor supply conditional on labor market dynamics and the availability of social transfers and other non-labor sources of income, gendered and spatial differences in labor market outcomes may imply unique incentive effects of social protection programs for men/women, and across urban/rural areas. In particular, one expects work

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relaxed definition recognizes the validity of the discouraged worker effect in Albania, and yields an unemployment rate of 13.4 percent in 2004.

disincentive effects of income transfers to differ in labor markets with different levels of risk and segmentation into high vs. low wage, and modern vs. agricultural, sectors. In urban Albania, unemployment risk is high and a small high-wage (formal) sector coexists with a large low-wage (informal) sector, where job tenure is shorter and the wage distribution is more unequal. Hence, urban transfer recipients, who are likely to initially enter the labor market with a low-paying job, may lower their labor supply in response to an unconditional income transfer.

On the other hand, in rural Albania, where (i) the rate of unemployment (labor force participation) has been traditionally lower (higher), (ii) the main activity, i.e. farming, is risky, and (iii) insurance/credit markets are either missing or incomplete, transfer income may serve as insurance, and the negative labor supply response may be absent. Additionally, since women record significantly lower labor force participation rates, and exhibit higher levels of unemployment and discouragement, the disincentive effects of income support, if any, may be stronger among females. Lastly, if social transfers prove inadequate to lift poor households out of poverty, and welfare recipients lack other forms of social insurance and access to credit to smooth consumption over time, negative labor response to program participation may translate into reductions in household welfare. These possibilities will be carefully considered as the links between transfer programs and household welfare and labor market outcomes are explored.

4. Data

The data used for the cross sectional, household-level analysis come from ALSMS02 and ALSMS05. The surveys are nationally representative and their sampling frames are stratified into four regions – namely coastal, central, mountain and Tirana (the capital city). ALSMS02 and ALSMS05 collected information on 3,599 and 3,640 households, respectively. A typical household questionnaire with general household demographics, education levels, asset

ownership, expenditures, labor force participation and social protection dynamics was administered in both years, in addition to a community questionnaire that included information on access to services and infrastructure in the locality, and price information. All variables used in our analysis were constructed from answers to identical questions in ALSMS02 and ALSMS05.

The data used for the panel, individual-level analysis are drawn from the APS. The nationally representative APS is a subsample of the 3,599 households interviewed for ALSMS02. More specifically, as part of the APS, 7,973 members of 1,782 ALSMS02 households were tracked and re-interviewed in 2003 and 2004. New members that joined the original 1,782 ALSMS02 households also participated in the panel survey, as well as the members of new households which were formed by original ALSMS02 individuals. Starting in 2003, only individuals aged 15 years and over were eligible for interview. Sample members that were abroad at the time of a particular wave of the APS were not tracked, but they remained eligible for interview at a future wave if they returned to their households in Albania. As a result, the panel survey collected information on 8,542 individuals living in more than 1,800 households from 2002 to 2004.

For the purposes of panel analysis, our sample is restricted to work-eligible individuals (i) for whom information is available for all three years, (ii) who have not been full-time students at any point between 2002 and 2004, and (iii) who were between the ages 15 and 55 in 2002. As the retirement age in Albania is 57 and 62 for women and men respectively, the age cut-off allows the sample individuals to be of working age throughout the period of analysis. Our results are robust to marginal changes in the ceiling age. Most importantly, heads of household have also been excluded because eligibility to NE is tied to their employment status. Including heads

of household could thus introduce a downward bias to our labor supply estimates. The final sample is a balanced panel of 2,329 individuals of whom 1,734 (74.4 percent) are women. The sample is heavily skewed towards women because households are overwhelmingly headed by males.

In Table 5 (6), we provide sample means from ALSMS02 and the results from the weighted tests of mean differences by household NE (old-age pension) recipient status. The tests of mean differences in individual characteristics were run among *work eligible individuals*, whereas the tests of mean differences in household-level variables were computed among *households*. 2005, as opposed to 2002, descriptive comparisons do not yield different results with respect to the findings reported here. The majority of the mean differences reported in Table 5 are statistically significant at the 1% level. We observe that work eligible individuals from NE households, on average, work less (in terms of hours or weeks of labor supplied), and are less likely to have worked in the past 7 days in comparison to their counterparts from non-NE households. In contrast, Table 6 shows that work eligible individuals from pension households are more likely to have worked the last seven days and work longer hours and more weeks with respect to comparable members of non-pension households, these differences are however small in magnitude. Although work-eligible individuals from NE households are less educated than their comparators from non-NE households, the comparison of years of education by household old-age pension recipient status yields the opposite result.

Furthermore, while NE households record, on average, lower per capita consumption than non-NE households, the test of mean differences in the same variable by household old-age pension recipient status does not lead to a statistically significant finding. Despite the fact that the average amount of land owned by NE households is significantly lower, these units record

higher average values for household size and all age categories of household composition (with the exception of number of household members above the age of 60) when compared to their non-NE counterparts. On the other hand, the opposite is true concerning the comparisons of these characteristics across pension recipient and non-recipient households.

Figure 1 shows 2002 household NE and old-age pension participation rates by per capita consumption deciles. We observe the poverty-targeting nature of the NE program as the percentage of program recipient households declines significantly with consumption level. While 32.3, 28.2 and 18.7 percent of the households participate in NE in the 1^{st}, 2^{nd}, and 3^{rd} deciles, respectively, the participation rates in the 8^{th}, 9^{th} and 10^{th} decile are 6.8, 1.7 and 3.8 percent, respectively. Conversely, household participation rates in old-age pension across consumption deciles are much more uniform, ranging from 36.7 percent in the 1st decile to 45.9 percent in the 10^{th} decile.

5. Empirical Methodology:

In order to compute unbiased estimates of the impact of a program on a set of outcomes, the researcher must estimate the counterfactual, i.e. what would have happened if the program had never been implemented. The estimation of the counterfactual is achieved by creating a control group, which is subsequently compared with a treatment group. The members of the control group should be identical to their counterparts in the treatment group in observed and unobserved characteristics, except for the fact that they do not participate in the program. For large enough samples, random assignment of an intervention would generate a control group that would be ex ante statistically indistinguishable from the treatment group. Control groups would then serve as sound counterfactuals, free from selection bias issues that often plague impact

evaluation efforts. Randomization also ensures that treatment is distributed independently of any other determinants of the outcome, which works towards eliminating omitted variable bias.

However, participation in anti-poverty programs, such as NE, is seldom random. Absent randomization, accounting for all observable and unobservable differences between the program recipients and non-recipients becomes essential for credible impact evaluations. Specifically, in order to compute consistent estimates of program impact, the researcher has to deal with estimation bias arising from (i) self-selection of treatment recipients, and (ii) nonrandom program placement, i.e. purposive program targeting based on a set of exogenous individual, household and/or community attributes. As is later, rationing in NE benefits increases the likelihood of finding non-participants in the data that are similar to the treated units in observable and unobservable characteristics. Thus, dealing with bias due to nonrandom program placement, as opposed to self-selection, becomes the more important issue for computing consistent impact estimates.[12]

5.1 Cross Sectional Analysis:

We pool the ALSMS02 and ALSMS05 cross sections, and estimate, via propensity score matching (PSM), the separate effects of household participation in NE and old-age pension on household consumption and subjective measures of poverty.[13] Since consumption data was not

[12] Household pension receipts mostly originate from pensioners' contributions throughout the communist era when all employment was formal and workers automatically contributed to the pension fund. Thus, bias due to self-selection should not be an issue for pension impact estimates.

[13]The objective variables of welfare chosen as outcome variables in household cross sectional analysis are (i) a dummy variable equal to 1 if a household is poor, (ii) poverty gap, (iii) poverty severity, (iv) real per capita monthly total consumption, and (v) real per capita monthly expenditures on food, nonfood, education, durables, and utilities. The following subjective measures of poverty, as evaluated by the household head, were used as outcome variables in cross sectional analysis: dummy variables equal to 1 if (i) household is satisfied with the current financial situation, (ii) the financial situation has improved in the past 3 years, (iii) the financial situation is expected to improve in the next 12 months, (iv) household overall consumption is adequate, (v) household food consumption is

collected as part of the APS, we can only provide cross sectional analysis of the impact of social protection programs on poverty outcomes.

Following Dehejia and Wahba (2002), we assume Y_{1i} to be the outcome for household *i* when it is subject to treatment and Y_{0i} to be the outcome for the same household *i* in the absence of the program. The treatment effect for a single unit, and the expected treatment effect for the treated population can be defined as $\tau_i = Y_{1i} - Y_{0i}$ and $\tau = E(Y_{1i} \mid T_i = 1) - E(Y_{0i} \mid T_i = 1)$, respectively, where T_i is equal to 1 if the i*th* unit is a program participant, and 0 otherwise. Since we do not observe outcomes that would have materialized if the participants had not been assigned treatment, $E(Y_{0i} \mid T_i = 1)$ is not estimable. As noted above, when treatment is randomly assigned to households, treatment status is independent of potential outcomes (Y_{1i}, $Y_{0i} \perp T_i$) such that $E(Y_{0i} \mid T_i = 0) = E(Y_{0i} \mid T_i = 1) = E(Y_i \mid T_i = 0)$. This implies that the average treatment effect for the treated population is $E(Y_i \mid T_i = 1) - E(Y_i \mid T_i = 0)$. If program assignment is not random but based on a vector of observable covariates, X_i, the distribution of X_i will not be independent of treatment status. However, conditional on observable covariates, we can assume assignment to treatment to have been random, such that Y_{1i}, $Y_{0i} \perp T_i \mid X_i$ (conditional independence assumption). The average treatment effect is then expressed as $\tau = E(Y_i \mid T_i = 1, X_i) - E(Y_i \mid T_i = 0, X_i)$.

The basic idea behind PSM is to construct a control group with observable characteristics similar to attributes of program recipients. Rosenbaum and Rubin (1983) have shown that if outcomes are independent of program participation conditional on X, then outcomes are also independent of program participation conditional on the propensity score; $P(X_i)$, which is the predicted probability of program participation given X.

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adequate, (vi) household is satisfied with life, (vii) life has improved in the past 3 years, and (viii) life is expected to improve in the next 12 months.

This study uses several methods to estimate of the average treatment effects (i) nearest neighbor matching with replacement, (ii) five-nearest neighbors matching with replacement, and (iii) kernel matching, as defined in Heckman, Ichimura, and Todd (HIT,1997). We use a caliper width of 0.001 for nearest neighbor and five nearest neighbor matching, and a bandwidth of 0.05 for kernel matching.[14] We also report bootstrapped standard errors for all matching estimates and explore the heterogeneity of impact by urban/rural residence, and gender.

Intuitively, PSM creates the observational equivalent of an experiment in which everyone has the same probability of participation. PSM differs from randomization in that in PSM, it is the probability conditional on observed variables that is balanced across the treated and matched comparators, while randomization assures that the treatment and comparison groups are identical in terms of the distribution of all characteristics whether observed or not (Ravallion, 2005).[15] Moreover, HIT (1997) state that the effectiveness of PSM partially depends on how well one can assure that treatment and comparison groups come from the same economic environment and were given the same survey instrument. Both conditions are fulfilled in our analysis.

HIT (1997) also note that two of three sources of estimation bias are eliminated via PSM. Firstly, bias due to differences in the supports of X in the treatment and control groups is eliminated if matching is conducted over the common support of $P(X_i)$, as in this study. Secondly, bias due to differences between the two groups in the distribution of X over the common support is avoided by comparing treated units with comparators weighted according to the proximity of their propensity scores with respect to those of the treated. Only bias due to

[14] Although we additionally used caliper widths of 0.01 and 0.0001 for nearest-neighbor and five-nearest neighbors matching, and bandwidths of 0.10 and 0.15 for kernel matching, these results are not reported due to space restrictions, but are available upon request. In any case, all our findings are robust to the choice of the matching estimator as well as the caliper width or bandwidth.

[15] For each layer of matching analysis, we test whether the matching has been successful in balancing observables across the treatment and comparison groups. The balancing test only aids in model specification for a given set of X, but it cannot provide any proof as to whether the conditional independence assumption is fulfilled. We make sure that the balancing property is satisfied before the average treatment effects are estimated in this study.

differences in unobservable characteristics across groups may be an issue for impact estimates computed by PSM.

5.1.1 Why Bias Due to Self-Selection Is Not Likely:

It is unfortunate that in the surveys households were not asked whether they applied for NE benefits, an information that could have helped control for possible unobservable differences between the treatment and comparison groups. Since the conditional independence assumption of PSM is empirically untestable, and that the internal validity of our matching estimates rely on the success of our efforts to eliminate selection bias, we present additional information in support of the counterfactual constructed via PSM. In Kolpeja (2006), NE administrators estimate that about 30-35 percent of applications are rejected due to (i) incompatibility with program criteria (5 percent), (ii) insufficient funds from the central government (15-20 percent), and (iii) provision of false information during the application process (10 percent). The existence of rationing in NE benefits to eligible Albanians, e.g. only 32.5 percent of the absolute poor receive NE (see table 7), allows us to find non-participants in the data set that are statistically indistinguishable from program participants in terms of observable and unobservable attributes.

Hence, we argue that our ability to deal with bias due to nonrandom program placement, as opposed to self-selection, should be the essential criterion for the consistency of our matching estimates. As the selection into the program at the local level is based on a set of observable household characteristics that were explained in section 3.1, controlling for observable differences between the treatment and comparison groups is crucial in computing impact estimates that are not plagued by nonrandom program placement.

5.1.2 Dealing with Nonrandom Program Placement:

The results of the probit regression of NE participation among the pooled sample of households are presented in Table 8. The mean propensity score is 0.14, and the predicted probabilities in the treatment group range from 0.0004 to 1. The scores of 71.2 percent of 7,239 observations are in the range of common support, over which the matching is conducted.[1617] The specification passes the balancing test as explained above. It also encompasses a wealth of household and community characteristics that (i) are expected to be influential over household's decision to apply for social assistance and (ii) are incorporated into decision-making processes of social administrators throughout their evaluations of social assistance applications and home visits paid to potential social assistance recipients.[18] By doing so, we are able to control for and match over observable covariates on which nonrandom program assignment is based.

Table 8 shows that both the numbers of working-age and above working-age household members unsurprisingly increase the likelihood of household participation in NE. Conversely, the number of employed household members is negatively associated with the probability of program participation. Since the likelihood of sustaining a livelihood and living out of poverty is closely related to the employment outcomes of work-eligible household members, this finding is also anticipated.

Being a single-headed household exerts a positive and statistically significant effect on the probability of program participation, as single-headed households are often more prone to poverty outcomes. On the contrary, pension recipient households and those with heads of good heart condition are less likely to be program participants. These results are foreseen given that

[16] For old-age pensions, the mean propensity score was 0.43, and the predicted probabilities in the treatment group ranged from 0.0071 to 1. Again, the scores of 71.2 percent of our sample were in the range of common support.
[17] Prior to the estimation of these propensity scores we also ran a probit regression of program participation using household variables pertaining to 1990 (i.e. before the establishment of the social assistance program). The results that obtain are very similar to those presented here and are available upon request.
[18] Household-level probit regressions of old-age pension participation use the exact set of covariates reported in Table 8.

the incidence of poverty in Albania has been shown to be less frequent among pension recipients than it is among NE participants, and that poor heart condition of a household head is likely to be associated with inadequate income generation, health costs and thereby poverty. The set of dwelling characteristics that enter into the report of the NE administrator following the home visit also assume statistically significant coefficients. The presence of a toilet, running water or a telephone as well as the number of dwelling rooms per capita are all negatively associated with the likelihood of program participation. Considering the lack of these amenities and crowding beyond the means of the dwelling are often indicative of poverty, these outcomes are predictable.

Additionally, a unit increase in the walking distance to the bus stop, which is included as an indicator for isolation from social services, reduces the probability of NE participation. Furthermore, we find that the total amount of social assistance funds to the commune exerts a positive effect on program participation.[19] It is reasonable that increases in allocations from the central government are likely to relieve the budgetary concerns of the communes regarding the extension of social assistance services, enabling them to extend coverage to more families in need. Lastly, the indicators for community-level poverty outcomes, such as the presence of cholera, hepatitis or HIV/AIDS in the community in the last 5 years, or living in communities with problems related to access to education, environment and drug abuse, are closely associated with NE participation.

5.2 Panel Analysis:

Following the large literature on the work disincentive effects of income transfer programs, we utilize the APS and static panel data models to explore the impact of household

[19]The data for social assistance fund allocations at the commune level were obtained for the 2002 and 2005 fiscal year from the Albanian Ministry of Labor and Social Affairs.

social transfers receipt from various programs on individual labor supply.[20] Heterogeneity of impact will be explored by gender, and through separate regressions for urban and rural subsamples. The main panel specification is:

(1) $y^{*}_{iht} = \beta' S_{iht} + \gamma' X_{iht} + \lambda' Z_{ih} + \Phi' T_t + \alpha_i + \varepsilon_{it}$

where y^{*}_{iht} is the outcome of interest for individual *i* living in household *h* at time *t*. It will take different forms: latent when the focus is on employment status, and observed (possibly truncated) when the focus shifts toward hours and weeks of labor supplied in the past 7 days and 12 months, respectively. Moreover, S_{iht} is a vector of four variables equal to the value of monthly transfers received by each individual's household from NE, old-age pension, labor invalidity pension and other social assistance schemes at time *t*. X_{iht} is a vector of other correlates that vary over individuals and time; Z_{ih} a vector of time-invariant variables that vary only over individuals; T_t is a vector of dummy variables capturing time-fixed effects; α_i represents the time-invariant, unobserved individual effect; and ε_{it} is the disturbance term.[21]

We also estimate first differencing models of hours and weeks of labor supplied in order to check the robustness of our fixed-effects estimates. In that case, the model is specified as:

$\Delta y^{*}_{iht} = \beta' \Delta S_{iht} + \gamma' \Delta X_{iht} + \Delta \varepsilon_{it}$.

Similar to the fixed effects models, first differencing estimator eliminates unobserved individual heterogeneity. If there are only two time periods, it yields results identical to those obtained through the fixed-effects estimator. When there are more than two time periods, the choice between the first differencing estimator and the fixed-effects estimator depends on the

[20]Dynamic models are not consider because of the small T (=3) of the panel. It is well established that at least four observations are necessary to consistently estimate parameters in dynamic panel models which account for state dependence, serial correlation, and neglected heterogeneity (Wooldridge, 2005).

[21] As is well known, if regressors are correlated with α_i, the fixed-effects estimator is consistent, while the random-effects estimator is inconsistent. On the other hand, if regressors are uncorrelated with α_i, the fixed-effects estimator is still consistent, though inefficient, whereas the random-effects estimator is both consistent and efficient (Wooldridge, 2005). We were always able to uphold the consistency and efficiency of the fixed effects estimator through Hausman specification tests. The results from the random effects models are available upon request.

assumptions concerning the error term. If errors are serially correlated across time, the first differencing estimator yields more efficient estimates (Wooldridge, 2005). We provide the results of serial auto-correlation tests that enable us to choose between the fixed effects and first differencing estimators.[22]

Furthermore, when the employment status is the outcome of interest, the following equation completes the system:

(2) $y_{iht} = 1(y^*_{iht} > 0)$

The dependent variables of the discrete choice models of employment status will be dummy variables indicating (i) labor force participation, (ii) employment for a non-household member, (iii) employment on a farm owned or rented by household, and (iv) self-employment. An individual is considered as part of the labor force if she either has worked in the past 7 days, or has not worked in the past 7 days but holds a permanent job, or is unemployed but has actively looked for a job in the past 4 weeks.

The panel analysis of dichotomous outcomes dictates us to choose among a limited set of empirical models, namely the fixed effects linear probability model (LPM), the conditional fixed effects logit model (LFE), and the random effects probit model (PRM). We choose not to use the PRM due to its underlying assumption that unobserved effects and covariates are independent and that unobserved effects are normally distributed. Since this assumption is likely to be violated in our case, we expect PRM estimates to be inconsistent. Moreover, the LFE is not preferred given that it severely constrains our estimation sample by disregarding individuals that record either 1 or 0 for a dependent variable across all years. The LFE cannot be conceptualized

[22]Under the null hypothesis of no serial autocorrelation, the residuals from the regression of first-differenced variables should have an autocorrelation of -0.5. This implies that the coefficient on lagged residuals in a regression of lagged residuals on current residuals should be -0.5. Wooldridge test of autocorrelation performs a Wald test of this hypothesis. If the resulting F-test statistic is significant, the first differencing estimator yields more efficient estimates in comparison to the fixed-effects estimator.

as a traditional fixed effects estimator anyway, since it does not actually estimate individual unobserved effects along with regression coefficients. “Sometimes the conditional MLE [maximum likelihood estimation] is described as ‘conditioning on the observed effects in the sample.’ This description is misleading.” (Wooldridge, 2005, p. 492) Wooldridge (2005) also shows that we cannot estimate average partial effects unless a distribution is specified for individual unobserved effects.

Considering the critical disadvantages of the PRM and LFE, our discrete model choice is the LPM. As is well known, the LPM is subject to the criticism of generating fitted values that are outside the unit interval. The model also implies that a ceteris paribus unit increase in a covariate leads the predicted probability conditional on all covariates to change by the same amount, regardless of the initial value of the covariate that is subject to the unit increase. On the other hand, the LPM provides semi-parametric identification, and successfully accounts for potential correlation between individual unobservable heterogeneity and covariates. Furthermore, it yields good estimates of marginal effects on the response probability near the center of the distribution of independent variables. If the researcher wants to assess how good the estimates of marginal effects are, the coefficients from the LPM can be compared with the marginal effects estimated from non-linear models. “If the main purpose is to estimate the partial effect of a covariate on the response probability, averaged across the distribution of x, then the fact that some predicted values are outside the unit interval may not be very important.” (Wooldridge, 2005, p. 455)

6. Results and Discussion:

6.1 Cross Sectional Results:

The household-level matching findings reported in this section are consistent across different matching estimators as well as different caliper widths/bandwidths used for each matching estimator. Only the results using the nearest-five neighbors matching estimator are reported in table 9. Results using the nearest neighbor and kernel estimator are very similar and available upon request. The results in Table 9 show differences in welfare between comparable NE and old-age pension transfer recipient and non-recipient households. Table 9 also shows the results when the urban and rural samples are considered separately. At the very least, anti-poverty program administrators would like to see no difference in average expenditure outcomes across treatment and comparison groups. The fact that the average value of real per capita monthly expenditure for the treated units is 1,037 Lek *less* than the figure for the matched comparators is worrisome.[23, 24] The matching analysis shows that while NE participants record lower figures in all expenditure categories, the difference in overall consumption across the treatment and comparison groups appears to be driven by the trends in food and nonfood expenditures. Specifically, the mean differences in the category of real per capita food and non-food expenditures are both estimated at -423 Lek. These estimates are statistically significant at the 1 percent level.

NE households are also less likely to (i) be satisfied with the current financial situation or life, (ii) think that the financial situation or life has improved in the past 3 years, (iii) believe that the current financial situation or life will improve in the next 12 months, and (iv) find overall and food consumption to be adequate. Exploring the heterogeneity of program impact by urban/rural

[23]The 2002 average difference in per capita consumption between NE participant and non-participant households was -3200 Lek, as reported in Table 5. In absolute terms, this figure is surely an overestimate of the actual program impact recovered from the PSM analysis.

[24]A confounding problem for the household-level matching estimates may be that income- or consumption-related poverty, which is the main outcome of interest, is also incorporated in the decision of the social administrator in order to determine the eligibility of an applicant household. However, the extensive set of variables included in the program participation regression should be adequate enough to reflect the welfare of sample households, rendering the potential problem irrelevant.

residence in columns (2) and (3), we observe that the negative impact on consumption (in terms of its magnitude) is primarily driven by urban households. In terms of statistical significance, the matching results are much more consistent across different matching estimators for the urban sample. Under nearest-five neighbors matching, the mean difference in real per capita monthly expenditure is -1,349 and -977 Lek in urban and rural areas, respectively. Both differences are statistically significant at the 1 percent level.

Conversely, as presented in the 4th column of Table 9, with the exception of a modest negative (positive) impact of pension participation on household's education (non-food) expenditure, household old-age pension recipient status does not exert any statistically significant impact on the outcomes considered in PSM. Splitting the sample into urban and rural areas, the impact of household participation in old-age pensions becomes even less significant. Indeed, columns (5) and (6) show that pension and non-pension households are similar across all variables except for their perception of their financial situation over the last three years where non-pension rural households think they fared worse.

6.2 Panel Analysis:

One hypothesis is that the higher incidence of poverty among NE households partially stems from transfer-induced reduction in labor supply of their members. Tables 10 and 11 report the results from the fixed effects models of hours worked in the past 7 days and weeks worked in the past 12 months, respectively. The models are estimated at the individual level, separately for the entire, rural and urban samples. In each layer of analysis, separate regressions were run for men and women. All specifications control for a number of time-variant individual and

household-level characteristics, as well as individual- and year-fixed effects. Social protection receipts are measured monthly, at the household-level.

***Intensive Margin Results*:** The findings for the entire sample suggest that labor supply response to NE assistance is strong and negative. The coefficients from the fixed effects models estimated using the entire sample imply that a *ceteris paribus* 2400 Lek (the average monthly NE transfer value among program participants in 2002) increase in NE receipts reduces individual labor supply by 1.6 hours per week and 2.2 weeks per year. The negative labor supply response to NE transfers is completely driven by female workers. Indeed, the coefficient for males is not statistically significant.[25] Tables 10 and 11 also present the impact estimates differentiated by urban/rural residence. We find that on average, a 2400 Lek upsurge in NE receipts generates a reduction of 2.7 and 2.9 units in hours and weeks worked, respectively, among urban individuals. By contrast, it is interesting to note that the receipt of NE has no impact on the amount of labor supplied by rural workers, male or female. In the end, one notes that the receipt of NE adversely impacts the labor supply of urban female workers only who reduce their effort by 2.8 hours a week and 2.8 weeks a year on average.

The sizeable adjustment of hours and weeks worked by individuals in response to household NE receipts stand in stark contrast to the labor supply trends among individuals living in households with pensioners. Despite being almost three times higher than NE transfers, old-age pension receipts fail to exert any statistically significant impact on hours and weeks of labor that individuals supply. Tables 10 and 11, however, show that female labor supply is still vulnerable to social transfers in the urban areas. Indeed, pension receipts reduce the hours and weeks urban women work albeit at a much smaller extent than NE transfers. Moreover, this

[25] Males reduce their supply of labor also after receiving NE if one keeps heads of household in the sample. These results are available upon request.

negative impact disappears for the number of hours worked when the first differences are considered as shown in Table 12. However, all the other results obtained with the first-differencing models are consistent with the fixed effects results discussed above.[26] The p-values from serial autocorrelation tests in Tables 10 and 11 actually indicate that first-differencing would yield more efficient estimates in comparison to the fixed-effects estimator.

In section 3, we noted our expectation concerning work disincentive effects of income transfers to be prominent in the presence of widespread unemployment, inadequate employment generation, and a high degree of worker discouragement, i.e. in urban areas and among females. This is fully supported by our intensive margin findings, which indicate unequivocal differences in individual labor supply response to household NE receipts. Considering that the effects of NE on household welfare and individual labor supply are both negative and primarily driven by the outcomes in urban areas, it is probable that the negative impact of program participation on household welfare is realized through negative individual labor response to household NE receipts in areas with weak labor demand and abundance of unemployed individuals who are likely to gain initial entry into the labor market at relatively low paid occupations.

Extensive Margin Results: Thus far, we have looked at the intensive margin results which show how individuals adjust the number of hours and weeks of work they supply upon the receipt of NE, pension and/or other transfers. However, transfer receipts can also influence the decision to work. In Albania, one distinguishes between three types of work (i) work for a non-household member, (ii) work on the household's farm, and (iii) work on own non-farm business.

[26] When we estimated either the fixed-effect or the first differencing model of hours and weeks worked for the entire sample with four dummy variables indicating whether a household received any transfers from the four social protection regimes considered, the results were very comparable, in terms of statistical significance and magnitude, to the findings from the individual-level matching that we conducted among work-eligible individuals from ALSMS02 and ALSMS05. Although these results are not reported here, they are available upon request. In any case, this observation may be supportive of the internal validity of the matching estimates.

An individual is said to be working if she chooses either of the three options. We estimate the effects of household social protection receipts on individuals' likelihood of (i), (ii), (iii) and (iv) working. The LPMs of these binary outcomes are presented in Tables 13 thru 16. All models are again estimated for the entire, rural and urban samples. In each layer of analysis, separate regressions are run for men and women.

We start with Table 13 and discussing the results from the regressions estimated using *all* individuals. For the entire and the urban sample, we find that in response to a ceteris paribus increase of 2400 Lek in NE transfers, the probability of labor force participation decreases by 5.8 percent. These results appear to be driven by the behavioral responses among females. The negative and statistically significant coefficient of household old-age pension receipts in these regressions is notably small in magnitude. In contrast, neither household NE nor old-age pension income is a significant determinant of labor force participation decision of rural individuals. Gendered and urban/rural differences in labor force participation can be explained by the same reasoning provided in discussion of the intensive margin results. In reference to the comparable elasticities presented in tables 10 and 11, the elasticities in table 13 indicate that the negative labor supply response to household NE receipts is concentrated at the extensive margin. Moreover, with the exception of the rural regressions, the LPM yields a quite reasonable number of fitted values lying outside the unit interval.

Table 14 presents the regression results concerning the likelihood of working for a non-household member. With respect to NE receipts the results are almost identical to those obtained with the overall labor force participation model, the impact becomes slightly stronger. On the other hand, old-age pension transfers either loose their statistically significant impact all the way and in the few cases the impact remains significant, it becomes much weaker as is the case for

urban women for instance. The rural LPMs also perform significantly better in terms the number of fitted values lying outside the unit interval.

Finally, tables 15 and 16 report the regression results regarding the probability of working on a farm rented or owned by the household, and working on own account, respectively. We observe that the LPMs presented in these tables perform poorer, placing the validity of their estimates under scrutiny. Generally, we are unable to detect uncontested and significant coefficients for household NE or old-age pension receipts, regardless of sample definition and/or gender. Hence, we can say that the estimated impact of household NE receipts on labor force participation appears to be concentrated on urban women who have opportunities to take-up a job outside the household.

7. Conclusion:

Although Albania's recent economic growth has reduced poverty levels substantially, the fraction of the population below a poverty line that is about USD 2 per person per day still stood at 18.5 percent in 2005. As evaluating the performance of Albanian social protection programs is vital to the efforts of anti-poverty policymakers, this study serves as the first systematic impact evaluation of the Ndihma Ekonomike social assistance program, and the old-age pensions, i.e. the central elements of the Albanian social protection system. In this respect, we do not find statistically significant average differences in all welfare outcomes of interest across pension households and their pension non-recipient comparators. In contrast, NE households, on average, record lower per capita consumption and exhibit a higher degree of discontent with life, financial situation, and consumption levels in comparison to their non-NE counterparts. Exploring the heterogeneity of impact by urban/rural residence allows us to state that the alarming differences

between NE treatment and comparison groups are principally driven by the trends in urban areas. We should note a possible confounding problem for the household-level matching estimates, as income- or consumption-related poverty, which is the main outcome of interest, is also incorporated in the decision of the social administrator in order to determine the eligibility of an applicant household. However, the extensive set of variables included in the program participation regression should be adequate to reflect the welfare of the sample households, rendering the potential problem irrelevant.

One unintended consequence of income transfers, which has been cited as a possible mechanism through which transfer programs can create poverty traps, is the negative labor response to program participation. In our quest for a possible explanation of the results concerning the effects of program participation on welfare outcomes, we consider the impact of household receipts from the above programs on work-eligible individuals' labor supply at the extensive and intensive margins. Our panel estimates indicate that on the whole, the individual labor supply response, either in terms of the likelihood of labor force participation or hours and weeks worked, to household NE receipts is large and negative. The negative labor supply response is stronger among women, and is present *only* in urban areas, where the levels of unemployment and long-term unemployment have been substantially higher compared to rural areas, and the formal labor demand has been quite weak in the post-transition era. In contrast, household pension receipts do not appear to influence any of the labor outcomes. These results are in line with the program impacts on welfare outcomes.

The panel findings may be subject to scrutiny in two ways. First, the household head is required to be unemployed for an eligible household to receive social assistance. One may claim that the panel coefficients on household NE receipts may suffer from endogeneity bias since the

reduction in the labor supply of the sample members that are household heads is the inevitable consequence of program participation. To counteract this criticism, we also estimated the panel models, excluding the household heads. The changes in the coefficients (in terms of magnitude and statistical significance) in all models, with the exception of male regressions, were trivial. In male regressions, the coefficients that were significant before became insignificant. This is most likely due to the reduction in the male sample size with the elimination of the household heads. The results from the regressions estimated without the household heads are available upon request. Secondly, if individuals become unemployed or cut down their labor supply in an attempt to reduce household income and become eligible for NE benefits, the panel results may be biased due to reverse causality. However, this scenario is not likely to plague our estimates since Albanian labor markets are highly informal, as presented in section 1.3, and that only formal sector earnings of households can be tracked and incorporated into calculations of social administrators to determine household eligibility status.

The impact estimates at the household- and individual-level indicate a few areas ripe for policy revision. The requirement of the unemployment of a household head throughout participation in the NE program may not foster the development of healthy working habits among remaining work-eligible household members. Therefore, this requirement should be dropped. In addition, one should recall that there is no time limit on receiving NE benefits. It is possible that the dependency on social assistance, the impacts on household welfare, and the severity of the negative labor supply response may differ across NE recipients in terms of the time spent as part of the program. This possibility should be explored before prescribing the dissolution of the program based on our findings on its negative impacts on household welfare. On the one hand, the welfare reduction may be more severe among older program participants,

as they may have exhibited greater dependence on welfare over years, and their negative labor supply response may have grown stronger with respect to newer NE beneficiaries. If so, time limits on NE eligibility may be considered.

On the other hand, older program participants may not even need the program as much as their newer counterparts. For instance, even if a household may have been eligible for NE and started receiving transfers at the inception of the program in 1995, it is not for certain that the household is still poor or in need of social assistance by 2002 or 2005. If so, this group of households is likely to contribute to the leakage rate of the program, measured in terms of the percentage of non-poor that are NE participants. If the pool of NE beneficiaries is further restricted in order to extend benefits to the households in greatest need, the average benefit level will subsequently increase, and the desired impact on household welfare may be achieved.

Furthermore, it is possible that the NE transfers may need to be larger if there are nonlinearities in amounts. A small transfer may not yield the desired impact on household objective or subjective measures of welfare, but doubling the transfer may more than double the impact. The lack of impact may in fact stem from the inadequacy of the funding. While the available data sources do not allow us to explore this possibility, panel data on household welfare would be useful to address the question.

In any case, the revisions in the program administration in order to extend benefits to households in greatest need, achieve a positive impact on household welfare, and reduce work disincentives should be matched with efforts to expand employment, particularly in urban areas. This is especially true since NE benefit in itself is often not as high as potential wage or self-employment earnings.

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Table 1: Government Expenditure on Social Protection, 2005

Program	Program Cost (Billion Lek)	Share of Total Social Protection Spending (%)	Share of GDP (%)
Social Insurance	45.2	76.0	5.4
Pensions	40.2	68.0	4.8
Compensations for Rural Pensions	0.5	1.0	0.1
Compensations for Urban Pensions	2.7	5.0	0.3
Allowances Over Veterans' Pensions	0.8	1.0	0.1
Maternity Benefit	0.8	1.0	0.1
All Other	0.2	0.0	0.0
Social Assistance	11.1	19.0	1.2
Ndihma Ekonomike	3.3	6.0	0.4
Disability Benefits	6.1	10.0	0.6
Social Care Institutions	0.5	1.0	0.1
All Other	1.2	2.0	0.1
Labor Market Programs	1.2	2.0	0.1
Employment Promotion Programs	0.1	0.0	0.0
Unemployment Benefit	0.9	2.0	0.1
Vocational Training	0.2	0.0	0.0
Administrative Costs	1.5	3.0	0.2
Total	59.0	100.0	6.9

Source: World Bank (2006c).

Table 2: Annual Registered Employment by Sector & Gender

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total Employment	1,137,829	1,115,760	1,107,677	1,085,104	1,065,104	1,068,190	920,569	920,144	926,225	931,217	932,102	935,058
Sector												
Agriculture Private Sector	750,000	761,000	761,000	761,000	761,000	761,000	526,337	526,337	533,639	542,152	542,152	542,000
(in %)	65.9	68.2	68.7	70.1	71.4	71.2	57.2	57.2	57.6	58.2	58.2	58.0
Public Sector	275,887	238,850	226,295	212,750	201,429	191,166	188,965	186,065	181,417	176,065	175,015	169,000
(in %)	24.2	21.4	20.4	19.6	18.9	17.9	20.5	20.2	19.6	18.9	18.8	18.1
Non-Agriculture Private Sector	111,942	115,910	120,382	111,354	102,675	116,024	205,267	207,742	211,169	213,000	214,935	224,058
(in %)	9.8	10.4	10.9	10.3	9.6	10.9	22.3	22.6	22.8	22.9	23.1	24.0
Employment Rate	62.5	60.3	59.0	57.0	56.0	55.1	51.9	51.1	50.7	50.3	49.7	48.7
Male	74.7	72.6	74.0	71.0	69.0	66.0	63.8	62.8	61.4	61.2	60.0	58.8
Female	50.2	47.9	45.0	43.0	42.0	44.1	39.4	38.9	38.2	38.9	38.8	38.1

Source: INSTAT; Population: 15-55 for Women, 15-59 for Men

Table 3: LSMS Labor Market Outcomes by Rural/Urban Residence (2002-2004)

	2002			2003			2004		
Outcomes	**National**	**Rural**	**Urban**	**National**	**Rural**	**Urban**	**National**	**Rural**	**Urban**
Labor Force Participation Rate - Relaxed	70.8	77.6	62.8	69.9	76.8	61.6	69.4	74.9	62.9
Labor Force Participation Rate - Standard	65.2	74.4	54.3	65.4	73.5	55.8	63.7	71	54.8
Unemployment Rate - Relaxed	17.3	5.6	20.1	12.9	5.1	13.6	13.4	5.6	13.8
Unemployment Rate - Standard	10.2	2.4	11.5	6.9	1.8	7.9	5.6	1.7	5.9
Long-Term Unemployment Rate	58.3	52.7	59.7	73.4	58.3	77.4	68.4	56.4	72.7
Employment Rate	58.5	72	42.8	60.9	71.8	47.9	60.1	69.3	49

Source: World Bank (2006b); Population: Individuals between 15 and 64 years of age; Long-Term Unemployment: Being Unemployed 12+ months.

Table 4: LSMS Labor Market Outcomes by Gender (2002-2004)

	2002 National		2002 Rural		2002 Urban	
Outcomes	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Labor Force Participation Rate - Relaxed	82.6	60.4	87.3	69.2	77.2	49.8
Labor Force Participation Rate - Standard	77.0	54.8	84.1	66.0	68.7	41.2
Unemployment Rate - Relaxed	16.8	17.9	7.6	6.9	28.7	36.4
Unemployment Rate - Standard	10.7	9.5	4.0	2.4	20.0	23.2
Long-Term Unemployment Rate	56.1	61.4	47.3	62.7	58.6	61.2
Employment Rate	68.7	49.6	80.7	64.4	55.0	31.7
	2003 National		**2003 Rural**		**2003 Urban**	
Labor Force Participation Rate - Relaxed	81.6	59.2	86.6	68.2	75.7	48.3
Labor Force Participation Rate - Standard	77.7	54.2	83.9	64.3	70.6	41.9
Unemployment Rate - Relaxed	11.4	14.6	5.9	7.4	18.8	27.1
Unemployment Rate - Standard	7.1	6.7	2.8	1.9	12.9	15.9
Long-Term Unemployment Rate	68.8	79.6	63.2	49.6	70.5	86.2
Employment Rate	72.2	50.6	81.5	63.1	61.5	35.2
	2004 National		**2004 Rural**		**2004 Urban**	
Labor Force Participation Rate - Relaxed	81.1	58.7	86.1	64.7	75.0	51.3
Labor Force Participation Rate - Standard	76.0	52.4	82.4	60.7	68.3	42.1
Unemployment Rate - Relaxed	11.2	16.1	6.9	8.1	17.1	28.7
Unemployment Rate - Standard	5.3	6.0	2.8	2.0	9.0	13.2
Long-Term Unemployment Rate	65.4	72.0	51.6	64.9	71.5	73.9
Employment Rate	72.0	49.2	80.1	59.5	62.2	36.6

Source: World Bank (2006b); Population: Individuals between 15 and 64 years of age; Long-Term Unemployment: Being Unemployed 12+ months.

Table 5: 2002 Means & P-Values from Tests of Mean Differences By NE Household Status

	Entire Sample	*Non-Recipient*	*Recipient*	*Difference*	*P-Value*
Individual Characteristics					
Male Δ	0.255	0.263	0.204	0.059	0.027
Age (Years)	32.90	33.19	30.94	2.25	0.001
Years of Education	9.32	9.46	8.44	1.01	0.000
Married Δ	0.701	0.699	0.714	-0.015	0.593
Hours Worked (Past 7 Days)	21.38	22.52	13.80	8.72	0.000
Weeks Worked (Past 12 Months)	22.49	23.86	13.37	10.48	0.000
Worked Past 7 days Δ	0.568	0.595	0.388	0.206	0.000
Works for a Non-HH Member Δ	0.187	0.210	0.033	0.177	0.000
Works on Own Account Δ	0.050	0.052	0.036	0.016	0.229
Works on HH Farm Δ	0.345	0.348	0.322	0.026	0.378
Observations	2329	2025 (86.95%)	304 (13.05%)		
	Entire Sample	*Non-Recipient*	*Recipient*	*Difference*	*P-Value*
Household Consumption Profile					
Absolute Poor Δ	0.19	0.16	0.43	-0.26	0.000
Per Capita Consumption	8762.48	9115.62	5918.00	3197.63	0.000
Monthly Household Social Protection Receipts					
Ndihma Ekonomike (100s)	263.94	0.00	2389.90	-2389.90	0.000
Old Age Pension (100s)	2809.96	3037.70	975.57	2062.13	0.000
Household Characteristics					
Head of HH: Age (Years)	51.10	51.96	44.15	7.81	0.000
Years of Education Head of HH	8.74	8.84	7.98	0.86	0.000
Head of HH: Employed Δ	0.65	0.66	0.63	0.03	0.292
Head of HH: Female Δ	0.12	0.13	0.11	0.02	0.365
Head of HH: Albanian Δ	0.98	0.98	0.99	-0.01	0.124
Household Size	4.28	4.21	4.86	-0.66	0.000
# of HH Members [0,5]	0.54	0.49	0.88	-0.39	0.000
# of HH Members [6,14]	0.70	0.66	1.01	-0.34	0.000
# of HH Members [15,60]	2.47	2.44	2.71	-0.27	0.000
# of HH Members 60+	0.53	0.56	0.25	0.31	0.000
# of Employed HH Members	1.64	1.67	1.40	0.27	0.000
Number of Agricultural Plots	2.02	1.99	2.26	-0.27	0.166
Land Area (Sq. Meters)	3976.62	4219.18	2022.92	2196.25	0.000
Dwelling: Brick Δ	0.58	0.58	0.56	0.02	0.466
Dwelling: Toilet Inside Δ	0.61	0.63	0.47	0.16	0.000
Dwelling: Running Water Δ	0.53	0.55	0.42	0.13	0.000
Dwelling: Electric Meter Δ	0.67	0.68	0.62	0.06	0.040
Dwelling: Telephone Δ	0.23	0.24	0.13	0.12	0.000
Distance to Primary School (Minutes)	12.80	12.50	15.22	-2.72	0.000
Distance to Ambulatory (Minutes)	18.50	17.89	23.47	-5.59	0.000
Distance to Bus Stop (Minutes)	17.14	16.58	21.68	-5.11	0.000
Rural Δ	0.54	0.54	0.56	-0.02	0.407
Coastal Δ	0.32	0.33	0.17	0.17	0.000
Central Δ	0.46	0.45	0.49	-0.04	0.171
Mountain Δ	0.10	0.07	0.31	-0.23	0.000
Tirana Δ	0.13	0.14	0.03	0.10	0.000
Observations	3559	3074 (85.41%)	525 (14.59%)		

Table 6: 2002 Means & P-Values from Tests of Mean Differences By Old-Age Pension Household Status

	Entire Sample	*Non-Recipient*	*Recipient*	*Difference*	*P-Value*
Individual Characteristics					
Male Δ	0.255	0.184	0.363	-0.179	0.000
Age (Years)	32.90	32.86	32.95	-0.09	0.849
Years of Education	9.32	9.22	9.48	-0.26	0.046
Married Δ	0.701	0.719	0.673	0.046	0.019
Hours Worked (Past 7 Days)	21.38	19.68	23.92	-4.24	0.000
Weeks Worked (Past 12 Months)	22.49	21.45	24.03	-2.58	0.007
Worked Past 7 days Δ	0.568	0.539	0.610	-0.071	0.001
Works for a Non-HH Member Δ	0.187	0.171	0.210	-0.039	0.019
Works on Own Account Δ	0.050	0.049	0.051	-0.002	0.835
Works on HH Farm Δ	0.345	0.335	0.360	-0.025	0.214
Observations	2329	1395 (59.9%)	934 (40.1%)		
	Entire Sample	*Non-Recipient*	*Recipient*	*Difference*	*P-Value*
Household Consumption Profile					
Absolute Poor Δ	0.19	0.20	0.18	0.03	0.078
Per Capita Consumption	8762.48	8661.17	8909.32	-248.16	0.180
Monthly Household Social Protection Receipts					
Ndihma Ekonomike (100s)	263.94	368.97	111.71	257.26	0.000
Old Age Pension (100s)	2809.96	0.00	6882.63	-6882.63	0.000
Household Characteristics					
Head of HH: Age (Years)	51.10	44.26	61.01	-16.74	0.000
Years of Education Head of HH	8.74	9.71	7.33	2.38	0.000
Head of HH: Employed Δ	0.65	0.81	0.43	0.38	0.000
Head of HH: Female Δ	0.12	0.10	0.16	-0.07	0.000
Head of HH: Albanian Δ	0.98	0.98	0.98	0.01	0.278
Household Size	4.28	4.29	4.27	0.01	0.871
# of HH Members [0,5]	0.54	0.58	0.47	0.11	0.001
# of HH Members [6,14]	0.70	0.88	0.45	0.43	0.000
# of HH Members [15,60]	2.47	2.76	2.06	0.69	0.000
# of HH Members 60+	0.53	0.06	1.20	-1.14	0.000
# of Employed HH Members	1.64	1.72	1.52	0.21	0.000
Number of Agricultural Plots	2.02	1.92	2.15	-0.23	0.045
Land Area (Sq. Meters)	3976.62	3578.60	4553.52	-974.92	0.000
Dwelling: Brick Δ	0.58	0.57	0.60	-0.03	0.095
Dwelling: Toilet Inside Δ	0.61	0.60	0.63	-0.03	0.078
Dwelling: Running Water Δ	0.53	0.52	0.54	-0.02	0.312
Dwelling: Electric Meter Δ	0.67	0.65	0.70	-0.05	0.015
Dwelling: Telephone Δ	0.23	0.21	0.26	-0.05	0.001
Distance to Primary School (Minutes)	12.80	13.08	12.40	0.68	0.160
Distance to Ambulatory (Minutes)	18.50	18.55	18.44	0.11	0.872
Distance to Bus Stop (Minutes)	17.14	17.35	16.84	0.52	0.527
Rural Δ	0.54	0.55	0.54	0.01	0.676
Coastal Δ	0.32	0.33	0.30	0.02	0.171
Central Δ	0.46	0.44	0.48	-0.03	0.103
Mountain Δ	0.10	0.11	0.09	0.01	0.064
Tirana Δ	0.13	0.13	0.13	0.00	0.648
Observations	3559	2173 (60.38%)	1426 (39.62%)		

Table 7: NE Coverage & Leakage Rates (2002-2005)

	National		Urban		Rural	
	2002	2005	2002	2005	2002	2005
% of Poor in NE (Coverage)	24.6	32.5	26.3	32.9	23.7	32.4
% of Non-poor in NE (Leakage)	7.8	9.5	7.9	6.3	7.7	12.7

Figure 1: 2002 Household Ndihma Ekonomike and Old-Age Pension Participation Rates by Per Capita Consumption Deciles

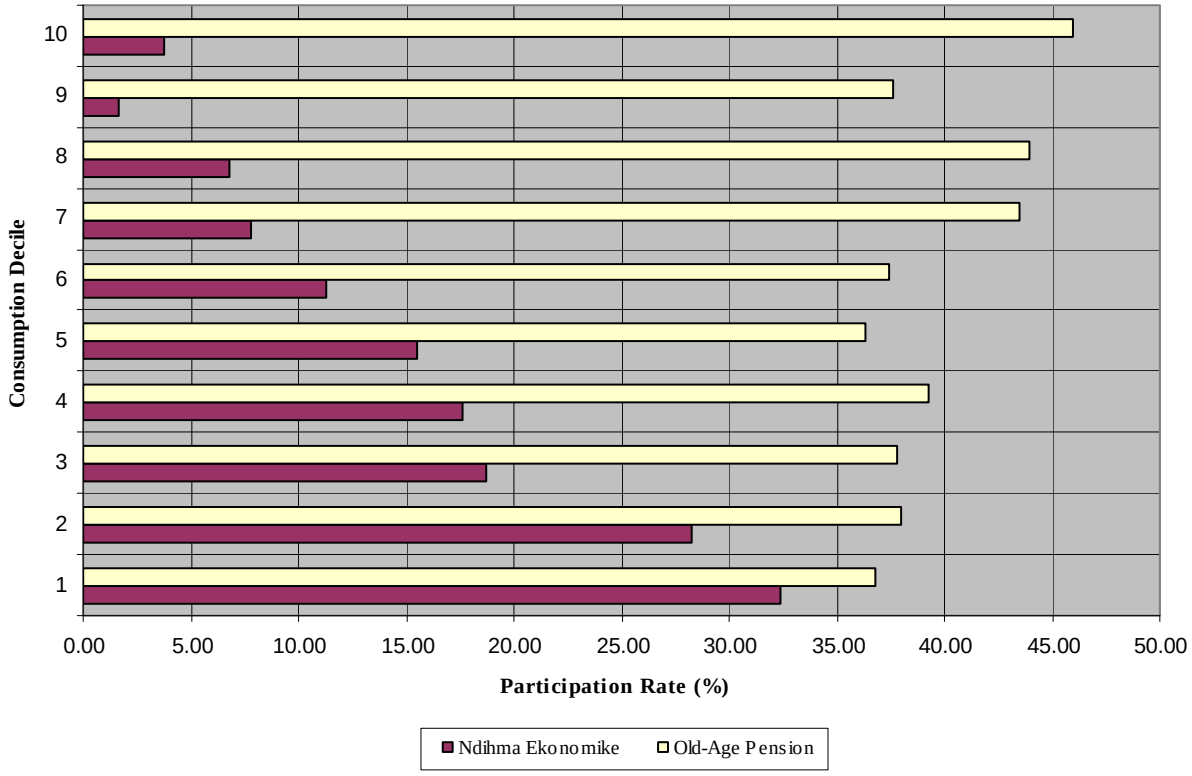

Table 8: Probit Results (Dependent Variable = 1 if HH Participates in Ndihma Ekonomike)

Household Human Capital	Coefficient	Standard Error
Single Headed HH	0.233	[0.109]**
HH Head Age (Years)	0.052	[0.019]***
HH Head Age Squared	-0.001	[0.000]***
HH Head Age Cubed	0.000	[0.000]***
HH Highest Years of Education	0.170	[0.075]**
# of HH Members Above Working Age	0.510	[0.271]*
# of HH Members Above Working Age Squared	-0.521	[0.296]*
# of HH Members Above Working Age Cubed	0.154	[0.082]*
# of HH Members Working Age	0.449	[0.128]***
# of HH Members Working Age Squared	-0.078	[0.032]**
# of HH Members Working Age Cubed	0.005	[0.002]**
# of HH Members Employed	-0.792	[0.090]***
# of HH Members Employed Squared	0.251	[0.040]***
# of HH Members Employed Cubed	-0.025	[0.005]***
HH Head Heart Condition Good | Very Good	-0.234	[0.059]***
A HH Member Has a Chronic Disease Lasted + 3 Months	0.096	[0.056]*
=1 if HH Receives Income from Old Age Pensions	-0.705	[0.091]***
Household Agricultural Asset Position		
Land Owned (Sq. Meters)	0.000	[0.0000]***
Land Owned Squared	0.000	[0.0000]***
Land Owned Cubed	0.000	[0.0000]***
Dwelling Characteristics		
Dwelling Has Toilet	-0.295	[0.066]***
Dwelling Has Electricity Meter	0.134	[0.063]**
Dwelling Has Telephone	-0.233	[0.071]***
Dwelling Living Conditions: Appropriate	-0.119	[0.068]*
Dwelling Rooms Per Capita	-0.378	[0.083]***
HH Uses Electricity for Heating	-0.283	[0.161]*
HH Uses Gas for Heating	-0.268	[0.150]*
Community Characteristics: Basics		
Community Road Conditions Improved Last 5 Years	-0.112	[0.067]*
Community Characteristics: Access to Public Services		
Present in Community: Private Hospital	0.504	[0.141]***
Present in Community: Labor Office	0.298	[0.107]***
Present in Community: Market	0.253	[0.118]**
Present in Community: Mosque/Church	0.126	[0.072]*
Present in Community: Community Room	-0.138	[0.084]*
Community Characteristics: Education Services		
Community Primary School Newly Built or Substantially Improved	0.148	[0.071]**
# of Community Primary School Students	0.000	[0.000]***
# of Community Primary School Teachers	0.002	[0.001]*
Community Primary School Has Toilet	-0.248	[0.102]**
Community Primary School Has Water	-0.267	[0.089]***
Community Primary School Has Electricity	0.193	[0.099]*
Community Secondary School Newly Built or Substantially Improved	-0.176	[0.086]**

Community Secondary School Has Water	0.221	[0.108]**
Community Secondary School Has Electricity	-0.221	[0.123]*
Community Secondary School Has More Boys	0.167	[0.090]*

Table 8 (Continued)

Community Characteristics: Health Services		
Community Health Center Open Every Day	-0.246	[0.095]***
Community Health Center Has Sufficient Instruments	0.135	[0.079]*
Community Characteristics: Community Services		
Functional Public Lighting in Community	0.234	[0.116]**
Functional Sewage in Community	0.177	[0.099]*
Functional Garbage Collection in Community	0.279	[0.144]*
Functional Public Phone in Community	-0.259	[0.144]*
Community Characteristics: Organization		
Farmer's Group Exists in Community	-0.155	[0.087]*
Sports Group Exists in Community	-0.278	[0.096]***
Neighborhood Committee Exists in Community	0.234	[0.077]***
Community Characteristics: Concerns & Safety		
1st Major concern in Community: Safety	-0.249	[0.143]*
1st Major concern in Community: Access to Education	0.387	[0.204]*
1st Major concern in Community: Transport	0.298	[0.161]*
1st Major concern in Community: Environment	0.370	[0.123]***
Problem in Community: Alcobol Abuse	-0.261	[0.089]***
Crime in Community: Sale of Illicit Drugs	0.355	[0.166]**
Community Characteristics: Environment		
Cholera in Community Last 5 Years	0.462	[0.254]*
Hepatitis in Community Last 5 Years	0.196	[0.077]**
HIV/AIDS in Community Last 5 Years	0.356	[0.163]**
Community Environment Improved Last 5 Years	0.138	[0.066]**
Year Fixed Effects		
2005	0.212	[0.077]***
Regional Fixed Effects		
Prefecture #3	-1.120	[0.220]***
Prefecture #5	-0.698	[0.183]***
Prefecture #6	-0.481	[0.254]*
Prefecture #8	0.546	[0.180]***
Prefecture #11	-0.942	[0.194]***
Prefecture #12	-1.314	[0.215]***
Observations	7237	
Pseudo R2	0.360	

Note: Only statistically significant variables are reported, even though the specification entailed 53 and 110 variables at the household- and community-level, respectively. */**/*** indicates significance at the 10/5/1 percent level, respectively. Standard errors are in brackets.

Table 9: Impact of HH Participation in NE and Old-Age Pension on Objective and Subjective Measures of Welfare

Outcome Variables	***Ndhima Ekonomike***			***Old-Age Pension Program***		
	All	*Urban*	*Rural*	*All*	*Urban*	*Rural*
	(1)	(2)	(3)	(4)	(5)	(6)
Absolute Poor Δ	0.076	0.107	0.059	0.004	0.000	0.024
	[0.022]***	[0.040]***	[0.043]	[0.039]	[0.043]	[0.060]
Poverty Gap	0.017	0.024	0.013	0.000	0.003	0.014
	[0.007]**	[0.010]**	[0.015]	[0.011]	[0.006]	[0.013]
Poverty Severity	0.005	0.007	0.004	-0.004	0.001	0.003
	[0.004]	[0.005]	[0.005]	[0.007]	[0.002]	[0.006]
Real Per Capita Expenditure	-1,036.61	-1,348.64	-976.976	-107.163	-515.217	-253.245
	[224.986]***	[321.667]***	[293.445]***	[447.487]	[710.123]	[503.937]
Real Per Capita Food Expenditure	-1,579.34	-2,085.11	-1,384.10	-41.383	-450.708	-185.004
	[180.181]***	[324.381]***	[350.499]***	[353.396]	[780.787]	[704.177]
Real Per Capita Non-Food Expenditure	-423.066	-593.677	-225.916	-222.903	-571.917	-156.397
	[114.944]***	[170.594]***	[198.573]	[249.723]	[532.377]	[488.787]
Real Per Capita Utilities Expenditure	-423.769	-485.878	-598.42	185.811	274.460	9.760
	[87.103]***	[119.117]***	[153.344]***	[108.653]*	[202.252]	[146.641]
Real Per Capita Education Expenditure	-119.253	-134.284	-85.663	-17.073	-179.356	-85.592
	[28.321]***	[54.492]**	[35.377]**	[60.245]	[137.400]	[77.230]
Real Per Capita Durables Expenditure	-43.724	-101.807	-37.291	-47.355	-42.102	-14.741
	[16.634]***	[54.980]*	[21.196]*	[23.569]**	[32.304]	[26.795]
Real Per Capita Expenditure Net of NE	-26.795	-32.989	-29.687	-5.642	3.697	-6.275
	[14.149]*	[11.146]***	[9.921]***	[11.163]	[16.110]	[14.277]
Satisfied with Current Financial Situation Δ	-0.078	-0.081	-0.081	-0.033	-0.016	-0.039
	[0.015]***	[0.021]***	[0.021]***	[0.033]	[0.055]	[0.038]
Financial Situation Improved Past 3 Years Δ	-0.084	-0.042	-0.077	-0.042	-0.026	-0.127
	[0.019]***	[0.027]	[0.035]**	[0.036]	[0.068]	[0.074]*
Financial Situation Improve Next 12 Months Δ	-0.069	-0.056	-0.055	0.001	0.032	0.023
	[0.023]***	[0.038]	[0.038]	[0.045]	[0.065]	[0.043]
Food Consumption Adequate Δ	-0.165	-0.121	-0.174	0.022	-0.053	-0.060
	[0.024]***	[0.038]***	[0.049]***	[0.051]	[0.062]	[0.064]
Overall Consumption Adequate Δ	-0.157	-0.129	-0.162	-0.005	-0.082	-0.072
	[0.027]***	[0.038]***	[0.044]***	[0.042]	[0.060]	[0.063]
Satisfied with Life Δ	-0.078	-0.054	-0.092	0.018	0.040	0.003
	[0.012]***	[0.025]**	[0.028]***	[0.029]	[0.060]	[0.029]
Life Improved Past 3 Years Δ	-0.104	-0.079	-0.095	-0.015	-0.039	-0.070
	[0.025]***	[0.029]***	[0.028]***	[0.038]	[0.049]	[0.056]
Life Improve Next 12 MonthsΔ	-0.007	0.03	0.031	-0.024	-0.043	-0.080
	[0.024]	[0.037]	[0.035]	[0.042]	[0.074]	[0.055]

Note: Results with the Nearest 5-Neighbors estimator and a caliper of 0.001. */**/*** indicates significance at the 10/5/1 percent level, respectively. Δ denotes a dummy variable. Bootstrapped standard errors are in brackets. Total Observation number is 7239 urban and rural sample: 3958, and 3279, respectively.

Table 10: Impact of HH Social Protection on Individual Labor Supply
Dependent Variable: Hours Worked in the Past 7 Days (Fixed Effects Models)

Entire Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0667	-0.079*	-0.0163	-0.014	-0.0783	-0.106**
	[0.0331]**	(0.042)	[0.1029]	(0.087)	[0.0335]**	(0.050)
Old Age Pension	-0.006	-0.019	0.0027	0.006	-0.0097	-0.036
	[0.0071]	(0.023)	[0.0126]	(0.029)	[0.0087]	(0.033)
Observations	6713		1661		5052	
Number of Groups	2239		554		1685	
Test for Autocorrelation (P-Value)	0.000		0.000		0.000	
Fraction of Variance due to Ui	0.59		0.53		0.61	
Correlation [Ui,Xb]	-0.12		-0.24		-0.25	
Rural Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	0.1077	0.097	0.2274	0.153	0.0691	0.069
	[0.0743]	(0.061)	[0.1971]	(0.114)	[0.0786]	(0.074)
Old Age Pension	-0.004	-0.010	-0.0278	-0.051	0.008	0.022
	[0.0118]	(0.029)	[0.0219]	(0.042)	[0.0140]	(0.038)
Observations	3642		912		2730	
Number of Groups	1214		304		910	
Test for Autocorrelation (P-Value)	0.000		0.000		0.000	
Fraction of Variance due to Ui	0.58		0.58		0.6	
Correlation [Ui,Xb]	-0.44		-0.5		-0.54	
Urban Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.1118	-0.162***	-0.093	-0.094	-0.1157	-0.201***
	[0.0358]***	(0.059)	[0.1221]	(0.134)	[0.0349]***	(0.071)
Old Age Pension	-0.0062	-0.025	0.0185	0.051	-0.0235	-0.111**
	[0.0087]	(0.035)	[0.0154]	(0.042)	[0.0108]**	(0.055)
Observations	3063		747		2316	
Number of Groups	1021		249		772	
Test for Autocorrelation (P-Value)	0.000		0.001		0.089	
Fraction of Variance due to Ui	0.65		0.67		0.68	
Correlation [Ui,Xb]	-0.18		-0.64		-0.19	

Notes for Tables 13 and 14: Fixed-effects are estimated at the individual-level. */**/*** indicates significance at the 10/5/1 percent level, respectively. The standard errors are in brackets. The elasticities are calculated at the mean value of NE and old-age pension receipts computed among the NE and old-age pension recipient households, respectively. The following variables are included in the regressions but their coefficient estimates are not reported: (i) household receipts from work-invalidity pension (100s); (ii) household receipts from all other social protection programs (100s); (iii) a dummy variable equal to 1 if an individual is married; (iv) a dummy variable equal to 1 if an individual's household is female-headed; (v) years of education of head of household; (vi) the number of household members in the following age categories: [0,5], [6,14], [15,55]; (vii) the number of household members that are domestic or international labor migrants; (viii) land area (in square meters) owned by a household; (ix) a dummy variable equal to 1 if a household is located in a rural area, and (x) year fixed effects for 2003 and 2004, where the default category is 2002.

Table 11: Impact of HH Social Protection on Individual Labor Supply
Dependent Variable: Weeks Worked in the Past 12 Months (Fixed Effects Models)

Entire Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0916	-0.111***	-0.0771	-0.077	-0.0963	-0.126***
	[0.0300]***	(0.040)	[0.0865]	(0.093)	[0.0315]***	(0.046)
Old Age Pension	-0.0078	-0.026	-0.0002	-0.001	-0.0115	-0.041
	[0.0064]	(0.022)	[0.0106]	(0.029)	[0.0082]	(0.030)
Observations	6713		1661		5052	
Number of Groups	2239		554		1685	
Test for Autocorrelation (P-Value)	0.000		0.000		0.000	
Fraction of Variance due to Ui	0.64		0.58		0.66	
Correlation [Ui,Xb]	-0.21		-0.2		-0.29	
Rural Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	0.0231	0.022	0.1094	0.085	-0.0065	-0.007
	[0.0689]	(0.064)	[0.1702]	(0.122)	[0.0752]	(0.078)
Old Age Pension	-0.0038	-0.010	-0.0027	-0.006	-0.0048	-0.013
	[0.0109]	(0.028)	[0.0189]	(0.040)	[0.0134]	(0.038)
Observations	3642		912		2730	
Number of Groups	1214		304		910	
Test for Autocorrelation (P-Value)	0.000		0.000		0.000	
Fraction of Variance due to Ui	0.61		0.59		0.62	
Correlation [Ui,Xb]	-0.46		-0.4		-0.5	
Urban Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.1196	-0.182***	-0.1321	-0.164	-0.1167	-0.196***
	[0.0314]***	(0.055)	[0.1002]	(0.142)	[0.0319]***	(0.063)
Old Age Pension	-0.0101	-0.042	0.0018	0.006	-0.0182	-0.083*
	[0.0076]	(0.032)	[0.0127]	(0.043)	[0.0099]*	(0.048)
Observations	3063		747		2316	
Number of Groups	1021		249		772	
Test for Autocorrelation (P-Value)	0.000		0.000		0.001	
Fraction of Variance due to Ui	0.7		0.67		0.72	
Correlation [Ui,Xb]	-0.14		-0.52		-0.07	

Table 12: Impact of HH Social Protection on Individual Labor Supply (First Differencing Models)

Entire Sample	*Hours Worked in the Past 7 Days*			*Weeks Worked in the Past 12 Months*		
Household Social Protection (100s)	*All*	*Male*	*Female*	*All*	*Male*	*Female*
Ndihma Ekonomike	-0.0885	-0.0693	-0.0924	-0.1049	-0.1193	-0.1039
	[0.0299]***	[0.1025]	[0.0300]***	[0.0268]***	[0.0856]	[0.0279]***
Old Age Pension	-0.0026	0.0038	-0.0063	-0.0048	0.0006	-0.0079
	[0.0070]	[0.0124]	[0.0088]	[0.0063]	[0.0103]	[0.0081]
Observations	4474	1107	3367	4474	1107	3367
Number of Groups	2239	554	1685	2239	554	1685
R-squared Overall	0.01	0.02	0.02	0.01	0.01	0.01
Rural Sample	*Hours Worked in the Past 7 Days*			*Weeks Worked in the Past 12 Months*		
Household Social Protection (100s)	*All*	*Male*	*Female*	*All*	*Male*	*Female*
Ndihma Ekonomike	0.0096	-0.0596	0.0215	-0.0615	-0.1099	-0.0554
	[0.0756]	[0.2012]	[0.0802]	[0.0695]	[0.1723]	[0.0761]
Old Age Pension	-0.012	-0.051	0.0087	-0.0097	-0.0184	-0.0049
	[0.0128]	[0.0238]**	[0.0153]	[0.0118]	[0.0203]	[0.0145]
Observations	2428	608	1820	2428	608	1820
Number of Groups	1214	304	910	1214	304	910
R-squared Overall	0.02	0.04	0.02	0.01	0.03	0.02
Urban Sample	*Hours Worked in the Past 7 Days*			*Weeks Worked in the Past 12 Months*		
Household Social Protection (100s)	*All*	*Male*	*Female*	*All*	*Male*	*Female*
Ndihma Ekonomike	-0.1048	-0.0628	-0.1096	-0.1112	-0.1167	-0.1097
	[0.0315]***	[0.1207]	[0.0306]***	[0.0274]***	[0.0982]	[0.0275]***
Old Age Pension	0.0029	0.0238	-0.0144	-0.0017	0.008	-0.0099
	[0.0082]	[0.0147]	[0.0103]	[0.0072]	[0.0119]	[0.0093]
Observations	2042	498	1544	2042	498	1544
Number of Groups	1021	249	772	1021	249	772
R-squared Overall	0.02	0.03	0.03	0.02	0.03	0.03

Note: */**/*** indicates significance at the 10/5/1 percent level, respectively. The standard errors are in brackets. The following variables are included in the regressions but their coefficient estimates are not reported: (i) household receipts from work-invalidity pension (100s); (ii) household receipts from all other social protection programs (100s); (iii) a dummy variable equal to 1 if an individual is married; (iv) a dummy variable equal to 1 if an individual's household is female-headed; (v) years of education of head of household; (vi) the number of household members in the following age categories: [0,5], [6,14], [15,55]; (vii) the number of household members that are domestic or international labor migrants; (viii) land area (in square meters) owned by a household; (ix) a dummy variable equal to 1 if a household is located in a rural area, and (x) year fixed effects for 2003 and 2004, where the default category is 2002.

Table 13: Impact of HH Social Protection on Likelihood of Labor Force Participation (Linear Probability, Fixed Effects Models)

Entire Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0021	-0.090***	-0.0016	-0.053	-0.0023	-0.104***
	[0.0007]***	(0.032)	[0.0018]	(0.065)	[0.0008]***	(0.038)
Old Age Pension	-0.0004	-0.042**	-0.0003	-0.025	-0.0004	-0.052**
	[0.0001]**	(0.018)	[0.0002]	(0.021)	[0.0002]**	(0.025)
Observations	6713		1661		5052	
Number of Groups	2239		554		1685	
Fraction of Variance due to Ui	0.57		0.43		0.6	
Correlation [Ui,Xb]	-0.19		-0.05		-0.3	
Rural Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0013	-0.048	-0.0025	-0.088	-0.0013	-0.049
	[0.0015]	(0.058)	[0.0033]	(0.123)	[0.0017]	(0.068)
Old Age Pension	-0.0003	-0.029	-0.0009	-0.084	0.0000	-0.002
	[0.0002]	(0.025)	[0.0004]**	(0.037)	[0.0003]	(0.032)
Observations	3642		912		2730	
Number of Groups	1214		304		910	
Fraction of Variance due to Ui	0.57		0.46		0.6	
Correlation [Ui,Xb]	-0.46		-0.24		-0.54	
Urban Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0023	-0.112***	-0.0016	-0.055	-0.0025	-0.140***
	[0.0008]***	(0.042)	[0.0024]	(0.088)	[0.0008]***	(0.052)
Old Age Pension	-0.0004	-0.055**	0.0001	0.005	-0.0007	-0.116***
	[0.0002]**	(0.026)	[0.0003]	(0.029)	[0.0003]***	(0.042)
Observations	3063		747		2316	
Number of Groups	1021		249		772	
Fraction of Variance due to Ui	0.61		0.53		0.64	
Correlation [Ui,Xb]	-0.16		-0.52		-0.24	

Notes for Tables 13-16: Fixed effects are estimated at the individual-level. */**/*** indicates significance at the 10/5/1 percent level, respectively. The standard errors are in brackets. The elasticities are calculated at the mean value of NE and old-age pension receipts computed among the NE and old-age pension recipient households, respectively. The following variables are included in the regressions but their coefficient estimates are not reported: (i) household receipts from work-invalidity pension (100s); (ii) household receipts from all other social protection programs (100s); (iii) a dummy variable equal to 1 if an individual is married; (iv) a dummy variable equal to 1 if an individual's household is female-headed; (v) years of education of head of household; (vi) the number of household members in the following age categories: [0,5], [6,14], [15,55]; (vii) the number of household members that are domestic or international labor migrants; (viii) land area (in square meters) owned by a household; (ix) a dummy variable equal to 1 if a household is located in a rural area, and (x) year fixed effects for 2003 and 2004, where the default category is 2002.

Table 14: Impact of HH Social Protection on Likelihood of Working for a Non-HH Member (Linear Probability, Fixed Effects Models)

Entire Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0023	-0.394***	-0.0028	-0.321	-0.0023	-0.490***
	[0.0005]***	(0.114)	[0.0018]	(0.267)	[0.0004]***	(0.140)
Old Age Pension	0.0001	0.050	0.0002	0.076	0.0000	0.014
	[0.0001]	(0.048)	[0.0002]	(0.068)	[0.0001]	(0.068)
Observations	6713		1661		5052	
Number of Groups	2239		554		1685	
Fraction of Variance due to Ui	0.61		0.52		0.64	
Correlation [Ui,Xb]	-0.15		-0.08		-0.27	
Rural Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0005	-0.146	-0.0019	-0.284	-0.0004	-0.276
	[0.0008]	(0.280)	[0.0033]	(0.609)	[0.0006]	(0.441)
Old Age Pension	0.0002	0.171*	0.0002	0.093	0.0002	0.293*
	[0.0001]	(0.101)	[0.0004]	(0.144)	[0.0001]*	(0.161)
Observations	3642		912		2730	
Number of Groups	1214		304		910	
Fraction of Variance due to Ui	0.59		0.5		0.62	
Correlation [Ui,Xb]	-0.5		-0.3		-0.56	
Urban Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0027	-0.253***	-0.0032	-0.264	-0.0027	-0.271***
	[0.0007]***	(0.078)	[0.0024]	(0.241)	[0.0007]***	(0.084)
Old Age Pension	0.0000	0.010	0.0003	0.067	-0.0001	-0.032
	[0.0002]	(0.042)	[0.0003]	(0.068)	[0.0002]	(0.058)
Observations	3063		747		2316	
Number of Groups	1021		249		772	
Fraction of Variance due to Ui	0.67		0.58		0.71	
Correlation [Ui,Xb]	-0.11		-0.45		-0.18	

Table 15: Impact of HH Social Protection on Likelihood of Working on HH Farm
(Linear Probability, Fixed Effects Models)

Entire Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0002	-0.017	-0.0004	-0.038	-0.0002	-0.011
	[0.0006]	(0.048)	[0.0016]	(0.154)	[0.0006]	(0.048)
Old Age Pension	-0.0002	-0.044	-0.0004	-0.111**	0.0000	-0.005
	[0.0001]	(0.028)	[0.0002]**	(0.054)	[0.0002]	(0.034)
Observations	6713		1661		5052	
Number of Groups	2239		554		1685	
Fraction of Variance due to Ui	0.67		0.65		0.68	
Correlation [Ui,Xb]	-0.06		0.05		-0.09	
Rural Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	-0.0007	-0.031	-0.0013	-0.074	-0.0006	-0.024
	[0.0017]	(0.079)	[0.0040]	(0.252)	[0.0018]	(0.080)
Old Age Pension	-0.0005	-0.058*	-0.0013	-0.204**	0.0000	-0.005
	[0.0003]*	(0.035)	[0.0004]***	(0.092)	[0.0003]	(0.038)
Observations	3642		912		2730	
Number of Groups	1214		304		910	
Fraction of Variance due to Ui	0.6		0.58		0.6	
Correlation [Ui,Xb]	-0.45		-0.31		-0.5	
Urban Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	0.0000	-0.032	0.0000	0.015	0.0000	-0.041
	[0.0003]	(0.289)	[0.0007]	(0.879)	[0.0003]	(0.299)
Old Age Pension	0.0000	-0.081	0.0000	-0.097	0.0000	-0.071
	[0.0001]	(0.195)	[0.0001]	(0.322)	[0.0001]	(0.255)
Observations	3063		747		2316	
Number of Groups	1021		249		772	
Fraction of Variance due to Ui	0.57		0.48		0.6	
Correlation [Ui,Xb]	-0.1		-0.1		-0.23	

Table 16: Impact of HH Social Protection on Likelihood of Working on Own Account (Linear Probability, Fixed Effects Models)

Entire Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	0.0003	0.095	0.0018	0.271*	0.0001	0.027
	[0.0004]	(0.115)	[0.0014]	(0.153)	[0.0004]	(0.184)
Old Age Pension	-0.0001	-0.104	0.0001	0.037	-0.0003	-0.344**
	[0.0001]	(0.079)	[0.0002]	(0.066)	[0.0001]**	(0.175)
Observations	6713		1661		5052	
Number of Groups	2239		554		1685	
Fraction of Variance due to Ui	0.59		0.58		0.59	
Correlation [Ui,Xb]	-0.19		-0.18		-0.19	
Rural Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	0.0002	0.091	0.0032	0.503**	-0.0004	-0.312
	[0.0008]	(0.332)	[0.0024]	(0.205)	[0.0008]	(0.889)
Old Age Pension	0	-0.036	0.0001	0.054	-0.0001	-0.243
	[0.0001]	(0.161)	[0.0003]	(0.111)	[0.0001]	(0.426)
Observations	3642		912		2730	
Number of Groups	1214		304		910	
Fraction of Variance due to Ui	0.51		0.55		0.49	
Correlation [Ui,Xb]	-0.16		-0.33		-0.17	
Urban Sample	*All*		*Male*		*Female*	
Household Social Protection (100s)	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*	*Coefficient*	*Elasticity*
Ndihma Ekonomike	0.0003	0.074	0.0011	0.130	0.0002	0.078
	[0.0005]	(0.105)	[0.0018]	(0.192)	[0.0004]	(0.142)
Old Age Pension	-0.0002	-0.108	0.0001	0.022	-0.0003	-0.328**
	[0.0001]	(0.079)	[0.0002]	(0.074)	[0.0001]**	(0.160)
Observations	3063		747		2316	
Number of Groups	1021		249		772	
Fraction of Variance due to Ui	0.64		0.76		0.66	
Correlation [Ui,Xb]	-0.19		-0.71		-0.19	